

### **REMARKS**

This responds to the Office Action mailed on April 18, 2006, and the references cited therewith.

Claims 1-4, 6-9, and 13-15 are amended, claims 16-18 are canceled, and no claims are added; as a result, claims 1-15 are now pending in this application.

#### **§112 Rejection of the Claims**

Claims 1-15 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The claims have been amended in light of the rejection under 35 USC 112.

The Office Action advises deletion of the word “improvement”. As amended, the claim now defines a method of iteratively optimising a design function.

The Office Action states that the word “modifying” on line 6 of claim 1 is vague. The Applicant does not concede that the word modifying is vague, as the claim defines a required outcome of the modification, namely that the second design function has a reduced maximum amplitude compared with the first design function. Dependent claim 8 specifies further that the first design function is modified by applying a normalisation process or an averaging process.

Nevertheless, in an effort to expedite prosecution of the application, the Applicant has amended the use of the verb “modifying” throughout the claims.

The Office Action also objects to the use of “desired functional spectral domain” and “desired improvement is achieved” in claim 1. Claim 1 has been amended to state that the third response function has “predetermined spectral characteristics in a functional portion of the spectral domain”. In addition, step (f) has been amended to indicate that the iterative repetition continues until predetermined quality criteria are met, the quality criteria comprising a reduction of a maximum refractive index variation in the waveguide material along the waveguide structure and the preservation of the predetermined spectral characteristics in the functional portion of the spectral domain.

Consequential amendments have been made in the dependent claims.

It is submitted that the claims as amended particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

§103 Rejection of the Claims

Claims 1-10 and 12-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Stepanov et al. (U.S. Pub. No. 2004/0146244).

Stepanov and the present application have a common assignee.

The Office Action, on page 4, concedes that Stepanov does not disclose “iterating the method steps until the desired improvement is achieved”. However, the Office Action has not given this feature patentable weight because “it has been held that a preamble is denied the effect of the limitation where the claim following the preamble is a self-contained description of the structure not depending for completeness upon the introductory clause.”

Claim 1 has been amended by moving description of “the improvement” from the preamble of the claim into the body of the claim.

It is submitted that claim 1 now clearly defines an iterative optimisation procedure that starts from a first design function and proceeds until predetermined quality criteria are satisfied.

The Applicant submits that the citation is entirely silent on the iterative optimisation method defined in the claims of the present application.

It is accordingly submitted that the claims of the present application are patentable in light of Stepanov.

Allowable Subject Matter

Claim 11 was indicated to be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, set forth in the Office Action and to include all of the limitations of the base claim and any intervening claims.

The Applicant has not so written claim 11, as the base claim and intervening claims are believed patentable for at least the reasons discussed above.

Favourable reconsideration is requested.

**CONCLUSION**

The Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at 408-278-4042 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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This paper or fee is being filed on the date indicated above using the USPTO's electronic filing system EFS-Web, and is addressed to The Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.